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Appl. No.: 10/524,710

Amdt. Dated April 26, 2007

Response to Office Action Mailed February 26, 2007

REMARKS:

Applicant appreciates the time and care the examiner has taken in examining the application. Applicant requests reconsideration of the final rejection of the claims, and states the following in support.

On the Amendments. Amended claim 1 now more clearly specifies that the first projecting parts have guiding surfaces positioned at least partially outside of outside edges of the leg portions so as to guide said outside edges of the leg portions and restrict the broadening of leading ends of the leg portions when the leg portions of the staple pass through the bundle of papers.

On the Rejections. Applicant respectfully traverses and requests reconsideration of the rejection of the claims under Section 103(a), and states the following in support.

With respect to the rejections, it is noted that amended independent claim 1 recites in pertinent part (emphasis added) that the driver structure comprises (relevant reference numerals added):

first projecting parts (7, 7 or 12, 12) provided at opposite end portions of the blade edge (2) and disposed to be in contact with each corner formed between the crown (6) and each of the leg portions (4, 4) for pressing the pair of leg portions perpendicularly when the pair of leg portions pass through the bundle of papers; and

second projecting parts (8, 8 or 13, 13) provided on the blade edge (2) in vicinity of the first projecting parts (7, 7 or 12, 12) and configured to be in contact with the crown in vicinity of the pair of leg portions when the pair of leg portions pass through the bundle of papers,

wherein each of the second projecting parts (8, 8 or 13, 13) has a corner portion disposed adjacent to the corner of the staple, which engages with the crown and is configured to prevent the corners of the leg portions from slipping toward a central side of the crown, and

wherein the first projecting parts (7, 7 or 12, 12) have guiding surfaces (7A, 7A) positioned at least partially outside of outside edges of the leg portions so as to guide said outside edges of the leg portions and restrict the broadening of leading ends of the leg portions when the leg portions of the staple pass through the bundle of papers.

Claim 3 recites (relevant reference numerals added):

The driver structure according to claim 1, further comprising a third projecting part (9 or 10) provided between the second projecting parts (8, 8 or 13, 13) to hold the crown of the staple when the pair of leg portions pass through the bundle of papers.

Claim 4 recites (relevant reference numerals added):

The driver structure according to claim 3, wherein the third projecting part (9 or 10) comprises a crown pressing portion to press the crown.

The first projecting parts are denoted as parts 7, 7 in Figs. 1-3 and as parts 12, 12 in Fig. 4. There is a set of two of these first projecting parts (7, 7 or 12, 12), disposed to be in contact with each staple corner that is formed between the crown 6 and each of the leg portions 4, 4 for pressing the pair of leg portions 4, 4 perpendicularly (*See* Figs. 1-4). It can be seen from Figs. 1-2 that the guiding surfaces (7A, 7A) of the first projecting parts (7, 7 or 12, 12) are positioned at least partially outside of the outside edges of the staple leg portions, so as to guide these outside edges and thereby restrict the broadening of the leading ends of the leg portions. The second projecting parts are denoted as parts 8, 8 in Figs. 1-3 and as parts 13, 13 in Fig. 4. This set of second projecting parts (8, 8 or 13, 13) is provided on the blade edge 2 in the vicinity of the set of first projecting parts (7, 7 or 12, 12). Each of the second projecting parts (8, 8 or 13, 13) is configured to be in contact with the crown 6 in vicinity of the pair of leg portions 4, 4. (*See* Figs. 1-4). Each of the two second projecting parts (8, 8 or 13, 13) has a corner, which is disposed adjacent to the corner of the staple, which engages with the crown 6 and is configured to prevent the corner of the leg portion 4 from slipping toward the central side of the crown 6. (*See* corners of second projecting parts 8, 8 in Figs. 1-3 and corners of parts 13, 13 in Fig. 4). Claim 3 recites the additional feature of a third projecting part for pressing the crown, positioned between the second projecting parts (8, 8 or 13, 13), denoted as reference numeral 9 in Fig. 1 and as numeral 10 in Fig. 2. In Fig. 2, the third projecting part (10) projects slightly from edges (10A, 10A).

-- As to Claim 1. The cited references as combined failed to disclose or suggest the features as claimed, because Ohmae fails to disclose or suggest both first *and* second sets of projecting parts, and Rinehardt fails to disclose or suggest the features of the first projecting parts having guiding surfaces as claimed. In the final Office Action, Ohmae's first set of projecting parts 17, 19 appear to be identified by the examiner as corresponding to the first projecting parts 7, 7 of the instant application. It is respectfully submitted that the examiner makes no adequate identification of a second set of projecting parts corresponding to the second projecting parts 8, 8 or 13, 13 of the instant claim. The examiner's depiction in a copied drawing, apparently Fig. 4

of Ohmae, shows the "Second projecting part" using an arrow pointing to a curved recess between a first projecting part 19 of Ohmae and Ohmae's single center projecting part 18. The latter, center projecting part 18 is designated by the examiner to be the "Third projecting part." It thus appears that the examiner considers the center projecting part 18 of Ohmae to correspond to the "second projecting parts" of the instant claim 1.

It is noted that claim 1 sets forth the plural form of "second projecting parts," meaning that there are more than one of such parts. Ohmae's center projection 18 is a single projection, not a pair. In addition, claim 1 provides that "each of the second projecting parts has a corner portion disposed adjacent to the corner of the staple, which engages with the crown and is configured to prevent the corners of the leg portions from slipping toward a central side of the crown." Ohmae's center projection 18 is a single projection, and so cannot read on "each of the second projecting parts" having corner portions disposed adjacent to their respective corners of the staple. Clearly, Ohmae's center projection 18 is not disposed so that its corner portion is disposed adjacent to the corner of the staple, because Ohmae's center projection 18 is a narrow crown-pressing member placed in the center of the blade edge of the driver 13, and is not in the vicinity of Ohmae's end-positioned projections 17, 19. Contrary to the terms of claim 1, Ohmae's projection 18 is not configured to be in contact with the crown "in vicinity of the pair of leg portions." Rather, Ohmae's projection 18 is configured to be in contact with the crown S_3 at a position in the middle of the driver 13. (Ohmae col. 2 lines 56-60). In fact, Ohmae specifies that:

The width W_1 of the projected portion 18 in the middle is smaller than the interval P_1 between inner sides of both leg portions S_3 , S_4 of a staple S .

[P]rojected portion 18 is not in contact with the upper surface of the bends S_1 , S_2

that are the upper ends of both leg portions S_3 , S_4 of the staple.

(Ohmae, col. 2 lines 62-67). This is contrary to the terms of claim 1, wherein the set of second projecting parts (8, 8 or 13, 13) is provided *in the vicinity of* the set of first projecting parts (7, 7 or 12, 12), and each of the second projecting parts (8, 8 or 13, 13) is configured to be in contact

with the crown 6 *in vicinity of* the pair of leg portions 4, 4. (See Figs. 1-4). Further, Ohmae's projection 18 does not have a corner portion *disposed adjacent to the corner of the staple* and configured to prevent the corners of the leg portions from slipping toward a central side of the crown.

Moreover, the cited references, alone or together, fail to teach or suggest the guiding surfaces 7A, 7A provided on the first projecting parts, positioned at least partially outside of outside edges of the leg portions to guide the outside edges of the leg portions and restrict the broadening of leading ends of the leg portions when the leg portions of the staple pass through the bundle of papers. The examiner has identified Rinehardt as providing "first projecting parts 34 with guiding surfaces in the direction of A" as guiding surfaces corresponding to those of claim 1. However, Rinehardt specifies that its driver arms 34 have "...working edges.... provided with curved surfaces having a radius of curvature approximately equal to that of the curved upper portion of the recess 32a. The width of the entire working edge of the staple driving blade is approximately equal to the width of the staple to be driven." (Rinehardt, col. 3 lines 13-19). The reason for this curvature and width is to serve the purpose of Rinehardt's design, *i.e.*, to press a force in the direction of arrows A, A, forcing the upper ends of the leg portions in the direction of A, A, whereby "portions of the staple engageable with the legs 34 are also *flexed inwardly* such that the crown portion of the staple takes on a *contour substantially similar to the contour of the article*." (Rinehardt, col. 5 lines 29-33). That contour is *round*, as seen in Fig. 5. Hence, the construction and operation of Rinehardt's driver arms 34 do not correspond to those of the guiding surfaces 7A, 7A of the first projecting parts (7, 7 or 12, 12). Those guiding surfaces 7A, 7A are positioned at least partially outside the outside edges of the legs, and serve to keep the corners of the staple from becoming rounded. They do so by guiding the outside edges of the staple legs and restricting the legs from broadening, while the corners of the second projecting parts (8, 8 or 13, 13) engage with the crown and prevent the corners of the leg portions from slipping toward a central side of the crown. The corner of the second

projecting part (8, 8 or 13, 13) is an approximate right angle, as implied by the name "corner" and shown in Figs. 1-2, which clearly differs from the curved construction of the driver arms 34 of Rinehardt, and from the curved edges shown on the projections 17, 19 in Ohmae, Fig. 4. The result of applicant's novel construction is exactly the opposite of the result of Rinehardt's construction: the staple is cleanly bent at its corner *without* becoming rounded.

-- As to Claims 3-4. The examiner appears to cite Ohmae's center projection 18 as corresponding to both the second projecting parts (8, 8 or 13, 13) and the third projecting part (9 or 10) herein. It is therefore submitted that the examiner makes no adequate finding of a third projecting part corresponding to the features claimed in claims 3-4 herein.

Therefore, it is respectfully submitted that the claims are not rendered obvious by the combination of Ohmae with Rinehardt, because they fail to yield the features claimed.

The contents of the prior responses to Office actions are herein incorporated by reference.

It is requested that the finality of the Office action be withdrawn, that the amendments be entered, and that the final rejection be withdrawn.

It is respectfully submitted that the application is in condition for prompt allowance and that all of the objections, rejections and requirements raised in the Office action have been met. Early, favorable treatment of this application is requested.

The examiner is encouraged to telephone the undersigned with any questions or comments so that efforts may be made to resolve any remaining issues.

Extension Request and Deposit Account Charge Authorization. The Commissioner is hereby authorized to charge any necessary fees, or credit any overpayment, associated with this communication, including fees for any necessary extension of time under 37 CFR §1.136(a) for

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filling this communication, which extension is hereby requested, to our Deposit Account No. 50-0305 of Chapman and Cutler LLP.

Respectfully submitted,

By: 

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CERTIFICATE OF FACSIMILE TRANSMISSION UNDER 37 C.F.R. § 1.8

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I hereby certify that the attached correspondence, namely: Response to Final Office Action, was transmitted by facsimile on the date listed above, to the U.S. Patent Office at the facsimile number listed above, under 37 C.F.R. § 1.8.

Signature: 

Typed Name of Person Signing this Certificate: Brenda A. Walton

Date of Signature: April 26, 2007